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FACSIMILE TRANSMISSION

DATE: May 29, 2008

TO:

NAME	FAX NO.	PHONE NO.
US Patent and Trademark Office Attn: Deposit Division	(571) 273-6500	

FROM: Einar Stole

PHONE: (202) 835-7553

RE: U.S. Patent Application Serial No. 10/821,326

FILE NUMBER: 38184.03401US		
NUMBER OF PAGES, INCLUDING COVER:	25	ORIGINALS FOLLOW BY MAIL: NO

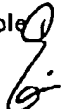
MESSAGE:

Dear Sir/Madam:

I would like to request for a refund of \$1,860.00. My American Express Card was charged twice for the same amount for the response to an Office Action we filed on May 9, 2008. A copy of said response is attached with a copy of a statement from American Express showing a double charge of \$1,860.00

Your kind attention to this request is highly appreciated. Kindly acknowledge receipt of this communication.

Einar Stole



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PAGE 1/25 * RCVD AT 5/30/2008 8:21:53 AM [Eastern Daylight Time] * SVR:USPTO-EFXXF-5/15 * DNIS:2736500 * CSID:2028357586 * DURATION (mm-ss):07:34 us by

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PAGE 1/001

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FACSIMILE TRANSMISSION

DATE: May 9, 2008

TO:	FAX NO.	PHONE NO.
U.S. Patent and Trademark Office Attn: Examiner Courtney Brown	(371) 271-5100	

FROM: Einar Smila PHONE: (202) 835-7553

Re: U.S. Patent Application Serial No. 11/116,132

PAT. NUMBER: 38184,034,031,115		
NUMBER OF PAGES, INCLUDING COVER:	24	ORIGINALS FOLLOW BY MAIL: NO

MESSAGE:

Dear Examiner Brown:

Attached is a copy of our response to the Office Action dated April 2, 2008 that was filed tonight, May 9, 2008.

Sincerely,
Einar Smila

CONFIDENTIALITY NOTE:
This facsimile transmits any confidential, attorney-client, or other confidential information. If you have received this facsimile in error, please notify the sender immediately. If you have received this facsimile in error, please notify the sender immediately. If you have received this facsimile in error, please notify the sender immediately.

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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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Effective on 12/08/2004.
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).**FEE TRANSMITTAL**
For FY 2008☐ Applicant claims small entity status. See 37 CFR 1.27**TOTAL AMOUNT OF PAYMENT** (\$) **1,860.00****Complete if Known**

Application Number	10/821,326
Filing Date	April 9, 2004
First Named Inventor	Leach
Examiner Name	Brown, Courtney A.
Art Unit	1616
Attorney Docket No.	38184.03402US

METHOD OF PAYMENT (check all that apply)

- ☐ Check ☒ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____
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FEE CALCULATION**1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	310	155	310	255	210	105	
Design	210	105	100	50	130	65	
Plant	210	105	310	155	160	80	
Reissue	310	155	310	255	620	310	
Provisional	210	105	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	Fee (\$)	Small Entity Fee (\$)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	210	105
Multiple dependent claims	370	185
Total Claims		
68 - 20 or HP = 12		
HP = highest number of total claims paid for, if greater than 20.		
Indep. Claims		
10 - 3 or HP = 6		
HP = highest number of independent claims paid for, if greater than 3.		
Fee Paid (\$)		
500		
Fee Paid (\$)		
1,260.00		

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$260 (\$130 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(g).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
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4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): 56 total claims with 4 independent claims paid on April 9, 2004.

Fees Paid (\$)**1,860.00****SUBMITTED BY**

Signature	Registration No. 47,272	Telephone 202-385-7553
Name (Print/Type) Einar Siola	(Attorney/Agent)	Date May 9, 2008

This collection of information is required by 37 CFR 1.138. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor: Leach *et al.*

Examiner: BROWN A. COURTNEY

Serial No.: 10/821,326

Art Unit: 1616

Filed: April 9, 2004

For: *Micronized Wood Preservative Formulations*Amendment and ResponseMail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Office Action dated April 2, 2008, Applicants timely submit the following Response within the shortened statutory period falling on July 2, 2008. Entry of the Response is respectfully requested.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 11 of this paper.

Adjustment date: 06/03/2008 HDESTA1
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02 FC:1202 -600.00 OP

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06/03/2008 0030056453

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01 FC:1201 1260.00 OP
02 FC:1202 600.00 OP

DC1:8147167v7

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor: Leach *et al.*

Examiner: BROWN A. COURTNEY

Serial No.: 10/821,326

Art Unit: 1616

Filed: April 9, 2004

For: *Micronized Wood Preservative Formulations*

Amendment and Response

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Office Action dated April 2, 2008, Applicants timely submit the following Response within the shortened statutory period falling on July 2, 2008. Entry of the Response is respectfully requested.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 11 of this paper.

PATENT
ATTORNEY DOCKET NO. 38184.03402US
U.S. Serial No. 10/821,326

In the claims:

Please amend the claims as indicated herein. This listing of claims will replace all previous listings.

Claims 1-22 (Cancelled).

23. (Currently Amended) A method for preserving a wood product comprising the step of contacting the product with a wood preservative composition comprising: (a) an-micronized particles of an inorganic biocide selected from the group consisting of a metal, metal compound and combinations thereof; and (b) one or more organic biocides, ~~wherein the inorganic biocide or the organic biocide is present as micronized particles.~~

24. (Previously Presented) The method of claim 23, further comprising the step of pressure treating the wood product with the wood preservative composition.

25. (Currently Amended) The method of claim 23, wherein the wood preservative composition comprises both the inorganic biocide and micronized particles of the organic biocide ~~are present as micronized particles.~~

26. (Currently Amended) The method of claim 23, wherein the micronized particles of the inorganic biocide ~~is~~ are copper, nickel, silver, or zinc or ~~and~~ compounds thereof.

27. (Currently Amended) The method of claim 26, wherein the copper compound is ~~selected from the group consisting of~~ copper hydroxide, copper oxide, copper carbonate, basic copper carbonate, copper oxychloride, ~~copper 8-hydroxyquinolate, copper dimethyldithiocarbamate, copper emadine and~~ or copper borate.

28. (Currently Amended) The method of claim 23, wherein the micronized particles of the inorganic biocide are ~~is~~ copper carbonate or copper hydroxide and the organic biocide is a quaternary ammonium compound selected from the group consisting of

PATENT
ATTORNEY DOCKET NO. 38184.03402US
U.S. Serial No. 10/821,326

alkyldimethylbenzylammonium chloride, dimethyldidecylammonium chloride, ~~and~~ dimethyldidecylammonium carbonate, and dimethyldidecylammonium bicarbonate.

29. (Currently Amended) The method of claim 28, wherein the micronized particles of the inorganic biocide ~~are~~ is copper carbonate and the organic biocide is dimethyldidecylammonium carbonate.

30. (Currently Amended) The method of claim 29, wherein ~~the size of the~~ micronized particles of the copper carbonate ~~partieles is~~ are between 0.005 and 25 microns.

31. (Currently Amended) The method of claim 23, wherein the micronized particles of the inorganic biocide ~~is~~ are copper carbonate and the organic biocide is tebuconazole.

Claims 32-33 (Cancelled).

34. (Previously Presented) The method of claim 23, wherein the wood preservative composition for treating wood further comprises an agent selected from the group consisting of water repellants, colorants, emulsifying agents, dispersants, stabilizers and UV inhibitors.

Claims 35-37. (Cancelled)

38. (Currently Amended) A method for wood preservation comprising the steps of treating wood with a composition comprising micronized particles of an inorganic biocide selected from the group consisting of ~~a metal, or metal compounds or and combinations thereof, wherein the size of the micronized particles is~~ between 0.005 and 25 microns.

39. (Currently Amended) The method of claim 38, wherein the micronized particles of the metal or metal compounds comprise ~~are selected from the group consisting of~~ copper, nickel, silver, or zinc ~~or and combinations thereof~~.

40. (Currently Amended) The method of claim 38, wherein the micronized particles of the ~~comprise metal or metal compounds~~ comprise ~~selected from the group consisting of~~ copper, copper hydroxide, copper oxide copper carbonate, basic copper carbonate, copper oxychloride,

PATENT
ATTORNEY DOCKET NO: 38184.03402US
U.S. Serial No. 10/821,326

~~copper-8-hydroxyquinolate, copper-dimethyldithiocarbamate, copper-ornadine, or~~ copper borate
and or combinations thereof.

41. (Currently Amended) The method of claim 40, wherein the micronized ~~particle~~ particles are
~~size is~~ between 0.005 and 10 microns.

42. (Currently Amended) The method of claim 41, wherein the micronized ~~particle~~ particles are
~~size is~~ between 0.05 and 1.0 microns.

43. (Original) The method of claim 40, wherein the treatment of wood is carried out by a process
selected from the group consisting of pressure treatment, spraying, dipping and brushing.

44. (Original) The method of claim 43, wherein the treatment of wood is carried out by pressure
treatment.

45. (Previously Presented) The method of claim 38 wherein the wood is treated with a wood
preservative composition further comprising an agent selected from the group consisting of water
repellants, colorants, emulsifying agents, dispersants, stabilizers and UV inhibitors.

Claims 46-56. (Cancelled).

57. (Currently Amended) The method of claim 23, wherein the micronized particles of the
inorganic biocide are is copper carbonate hydroxide and the organic biocide is a compound
~~selected from the group consisting of a fungicide, insecticide, algacide, moldicide or~~
bactericide ~~the compounds in Table 1.~~

Claims 58-95 (Cancelled).

96. (Currently Amended) The method of claim 23, wherein the micronized particles of the
inorganic biocide have a size of between 0.001 microns to 25 microns.

97. (Currently Amended) The method of claim 96, wherein the micronized particles of the
inorganic biocide have a size of between 0.001 microns to 10 microns.

PATENT
ATTORNEY DOCKET NO. 38184.03402US
U.S. Serial No. 10/821,326

98. (Currently Amended) The method of claim 97, wherein the micronized particles of the inorganic biocide have a size of between 0.05 microns to 10 microns.

99. (Currently Amended) The method of claim 98, wherein the micronized particles of the inorganic biocide have a size of between 0.05 microns to 1.0 microns.

100. (Currently Amended) The method of claim 28, wherein the micronized particles of the inorganic biocide is copper carbonate and the organic biocide is dimethyldidecylammonium bicarbonate.

101. (Currently Amended) The method of claim 30, wherein ~~the size of the~~ micronized copper carbonate particles are ~~is~~ between 0.05 and 25 microns.

102. (Currently Amended) The method of claim 101, wherein ~~the size of the~~ micronized copper carbonate particles are ~~is~~ between 0.05 and 10 microns.

103. (Currently Amended) The method of claim 102, wherein ~~the size of the~~ micronized copper carbonate particles are ~~is~~ between 0.05 and 1 microns.

104. (Currently Amended) The method for wood preservation of claim 38 ~~comprising the steps of treating wood with a composition comprising micronized particles selected from the group consisting of metal, metal compounds and combinations thereof~~, wherein the size of the micronized particles of the metal or metal compound are ~~is~~ between 0.05 and 10 microns.

105. (Currently Amended) The method for wood preservation of claim 104 ~~comprising the steps of treating wood with a composition comprising micronized particles selected from the group consisting of metal, metal compounds and combinations thereof~~, wherein the size of the micronized particles of the metal or metal compound are ~~is~~ between 0.05 and 1 microns.

106. (New) A method for preserving a wood product comprising the steps of (a) adding water to a concentrated wood preservative composition comprising a copper carbonate between 0.005 and 25 microns to prepare a treating fluid and (b) pressure treating a wood product with the treating fluid.

PATENT
ATTORNEY DOCKET NO. 38184.03402US
U.S. Serial No. 10/821,326

107. (New) The method of claim 106, wherein the wood preservative composition further comprises tebuconazole.

108. (New) The method of claim 107, wherein the micronized copper carbonate particles are between 0.05 and 1 microns.

109. (New) The method of claim 106, wherein the micronized copper carbonate particles are between 0.05 and 10 microns.

110. (New) The method of claim 106, wherein the micronized copper carbonate particles are between 0.05 and 1 microns.

111. (New) The method of claim 106, wherein the wood preservative composition further comprises a quaternary ammonium compound.

112. (New) The method of claim 111, wherein the quaternary ammonium compound is didecyldimethyl ammonium carbonate.

113. (New) The method of claim 111, wherein the quaternary ammonium compound is didecyldimethyl ammonium bicarbonate.

114. (New) The method of claim 111, wherein the quaternary ammonium compound is alkyldimethylbenzylammonium chloride, dimethyldidecylammonium chloride, dimethyldidecylammonium carbonate, or dimethyldidecylammonium bicarbonate.

115. (New) The method of claim 111, wherein said treatment produces a uniform distribution of copper throughout the wood product.

116. (New) A method for preserving a wood product comprising the steps of contacting a wood preservative composition comprising a milled copper carbonate with a particle size of between 0.005 and 25 microns.

117. (New) The method of claim 116, further comprising tebuconazole.

- 6 -

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PATENT
ATTORNEY DOCKET NO. 38184.03402US
U.S. Serial No. 10/821,326

118. (New) The method of claim 116, wherein the wood preservative composition further comprising a quaternary ammonium compound.
119. (New) The method of claim 116, wherein the wood preservative composition further comprising didecyldimethyl ammonium carbonate.
120. (New) The method of claim 116, wherein the wood preservative composition further comprising didecyldimethyl ammonium bicarbonate.
121. (New) The method of claim 118, wherein the quaternary ammonium compound is alkyl dimethyl benzyl ammonium chloride, dimethyldidecyl ammonium chloride, dimethyldidecyl ammonium carbonate, or dimethyldidecyl ammonium bicarbonate.
122. (New) The method of claim 116, wherein said treatment produces a uniform distribution of copper throughout the wood product.
123. (New) A method for preserving a wood product comprising the step of contacting the product with a wood preservative composition comprising: (a) an inorganic biocide selected from the group consisting of a metal, metal compound and combinations thereof; and (b) micronized particles of one or more organic biocides.
124. (New) The method of claim 123, wherein the inorganic biocide is selected from the group consisting of copper nitrate, copper sulfate and copper acetate.
125. (New) A method for preserving a wood product comprising the step of contacting the product with an aqueous wood preservative composition comprising: (a) micronized particles of

PATENT
ATTORNEY DOCKET NO. 38184.03402US
U.S. Serial No. 10/821,326

copper carbonate between 0.05 and 1 microns; (b) dimethyldidecylammonium carbonate; and (c) dimethyldidecylammonium bicarbonate.

126. (New) The method of claim 125, wherein said treatment produces a uniform distribution of copper throughout the wood product.

127. (New) The method of claim 125, wherein the wood product after the contacting step is resistant to decay and insect attack.

128. (New) The method of claim 126, wherein the wood product after the contacting step is resistant to decay and insect attack.

129. (New) A method for preserving a wood product comprising the step of contacting the product with an aqueous wood preservative composition comprising: (a) micronized particles of copper carbonate milled to between 0.05 and 1 microns; (b) dimethyldidecylammonium carbonate; and (c) dimethyldidecylammonium bicarbonate.

130. (New) The method of claim 129, wherein said treatment produces a uniform distribution of copper throughout the wood product.

131. (New) The method of claim 129, wherein the wood product after the contacting step is resistant to decay and insect attack.

132. (New) The method of claim 130, wherein the wood product after the contacting step is resistant to decay and insect attack.

133. (New) A method for preserving a wood product comprising the step of contacting the

PATENT
ATTORNEY DOCKET NO. 38184.03402US
U.S. Serial No. 10/821,326

product with an aqueous wood preservative composition comprising: (a) micronized particles of copper carbonate milled to between 0.05 and 1 microns.

134. (New) The method of claim 133, wherein said treatment produces a uniform distribution of copper throughout the wood product.

135. (New) The method of claim 133, wherein the wood product after the contacting step is resistant to decay and insect attack.

136. (New) The method of claim 134, wherein the wood product after the contacting step is resistant to decay and insect attack.

137. (New) A method for preserving a wood product comprising the step of contacting the product with an aqueous wood preservative composition comprising: (a) micronized particles of copper carbonate between 0.05 and 1 microns; and (b) tebuconazole.

138. (New) The method of claim 137, wherein said treatment produces a uniform distribution of copper throughout the wood product.

139. (New) The method of claim 137, wherein the wood product after the contacting step is resistant to decay and insect attack.

140. (New) The method of claim 138, wherein the wood product after the contacting step is resistant to decay and insect attack.

141. (New) A method for preserving a wood product comprising the step of contacting the product with an aqueous wood preservative composition comprising: (a) micronized particles of

PATENT
ATTORNEY DOCKET NO. 38184.03402US
U.S. Serial No. 10/821,326

copper carbonate milled to between 0.05 and 1 microns; and (b) tebuconazole.

142. (New) The method of claim 141, wherein said treatment produces a uniform distribution of copper throughout the wood product.

143. (New) The method of claim 141, wherein the wood product after the contacting step is resistant to decay and insect attack.

144. (New) The method of claim 142, wherein the wood product after the contacting step is resistant to decay and insect attack.

PATENT
ATTORNEY DOCKET NO. 38184.03402US
U.S. Serial No. 10/821,326

Remarks

Applicants timely submit this response to the Examiner's Office Action of April 2, 2008 within the shortened statutory period falling on July 2, 2008. The Office Action has been carefully reviewed and the following remarks are made in response thereto. Claims 23, 25-31, 38-42, 57, and 96-105 have been amended. Claims 32, 33, 35-37, and 46-48 have been cancelled. Claims 106-144 have been added.

Support for "particles" of Claims 23, 25-26, 28-31, 38-42, 57, 96-106, 125, 127, 131, 135, 139 and 143 may be found throughout the specification but at least at paragraphs 8, 24, 26, 27 and 33 of this application and at least at lines 20-24 of page 3, lines 10-19 of page 5 of U.S. Provisional Application No. 60/461,547, filed Apr. 9, 2003.

Support for "a milled" of Claims 106, 119, 131, 135 and 143 may be found at least at paragraph 27 of this application and Examples 1-4 of this application and at least at line 1 of page 4, at lines 4-5 of page 5, Examples 1-4 of U.S. Provisional Application No. 60/518,994, filed Nov. 11, 2003.

Support for "a fungicide, insecticide, algacide, moldicide and bactericide" of Claim 57 can be found at least at paragraph 29 of this application and at least at lines 1-6 of page 6 of U.S. Provisional Application No. 60/461,547, filed Apr. 9, 2003.

Support for "tebuconazole" of Claims 31, 107, 139 and 143 can be found at least at Table 1 and Examples 3, 10 and 11 of this application and at least at Example 6 of U.S. Provisional Application No. 60/461,547, filed Apr. 9, 2003.

Support for "copper carbonate" of Claims 28-31, 57, 100-103, 106, 108-113, 119, 127, 131, 135, 139 and 143 can be found at least at paragraphs 26 and Examples 2, 3, 9, 10, 13 of this application and at least at lines 10-19 of page 5 of U.S. Provisional Application No. 60/461,547, filed Apr. 9, 2003.

PATENT
ATTORNEY DOCKET NO. 38184.05402US
U.S. Serial No. 10/821,326

Support for "quaternary ammonium compound" in Claims 28, 114-117, 120 and 123 can be found at least at paragraph 30 of this application and at least at lines 1-3 of page 3 of U.S. Provisional Application No. 60/461,547, filed Apr. 9, 2003.

Support for "didecyldimethylammonium carbonate, or didecyldimethylammonium bicarbonate" in Claims 28, 29, 100, 115-117, 121-123, 127 and 131 can be found at least at paragraph 30 and Examples 7 and 8 of this application and at least at Example 3 of U.S. Provisional Application No. 60/461,547, filed Apr. 9, 2003.

Support for "uniform distribution of copper" of Claims 118, 124, 128, 132, 136, 140 and 144 can be found at least at paragraph 45 and Examples 6, 9, 10 of this application and at least at Examples 2 and 4 of U.S. Provisional Application No. 60/461,547, filed Apr. 9, 2003.

In view of the amendments and following remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

I. Interview Summary

Applicants and Applicants' representative sincerely thank the Examiner for the courtesy of an interview. Applicants' representative, Einar Stole, and the Examiner discussed all pending claims and all rejections of the pending claims. The Examiner and Applicants' representative also discussed claim language that is embodied in the attached amendment. Applicants' representative noted that the components disclosed in the cited references are not micronized particles.

II. Summary of the Office Action

1. Upon entry of the attached amendment, claims 23-31, 34, 38-45, 57, 96-144 will be pending.
2. Claim 57 is rejected as allegedly indefinite for recites "biocides listed in Table 1."

PATENT
ATTORNEY DOCKET NO. 38184.03402US
U.S. Serial No. 10/821,325

3. Claims 23-48, 57 and 96-105 are rejected as allegedly unpatentable, under the doctrine of nonstatutory obviousness type double patenting, over claims 11, 12, and 20 of copending Application No. 11/299,522 in view of Heuer *et al.* (US Patent No. 5,874,025) further in view of Bell (US Patent No. 5,426,121) and Preston *et al.* (US Patent No. 6,274,199).
4. Claims 23-48, 57 and 96-105 are provisionally rejected as allegedly unpatentable, under the doctrine of nonstatutory obviousness type double patenting, over claims 12-15 and 17-20 of copending Application No. 11/250,312 in view of Bell (US Patent No. 5,426,121) and Preston *et al.* (US Patent No. 6,274,199).
5. Claims 23-48, 57 and 96-105 are rejected as allegedly unpatentable, under the doctrine of nonstatutory obviousness type double patenting, over claims 1-10 and 13-18 of copending Application No. 11/471,763 in view of Heuer *et al.* (US Patent No. 5,874,025) further in view of Bell (US Patent No. 5,426,121) and Preston *et al.* (US Patent No. 6,274,199).
6. Claims 23-48, 57 and 96-105 are rejected as allegedly unpatentable, under the doctrine of nonstatutory obviousness type double patenting, over claims 6 and 9-13 of copending Application No. 11/849,082 in view of Heuer *et al.* (US Patent No. 5,874,025) further in view of Bell (US Patent No. 5,426,121) and Preston *et al.* (US Patent No. 6,274,199).
7. Claims 23-48, 57 and 96-105 are rejected as allegedly unpatentable, under the doctrine of nonstatutory obviousness type double patenting, over claims 9, 13-15, 17 and 23-24 of copending Application No. 11/126,839 in view of Heuer *et al.* (US Patent No. 5,874,025) further in view of Bell (US Patent No. 5,426,121) and Preston *et al.* (US Patent No. 6,274,199).
8. Claims 23-48, 57 and 96-105 are rejected as allegedly unpatentable, under the doctrine of nonstatutory obviousness type double patenting, over claims 11-23 of copending Application No. 11/116,152 in view of Heuer *et al.* (US Patent No. 5,874,025).
9. Claims 23-48, 57 and 96-105 are rejected as allegedly unpatentable, under the doctrine of nonstatutory obviousness type double patenting, over claims 21, 24, 25, 31, 35, 54, 57, 58, 66-

PATENT
ATTORNEY DOCKET NO. 38184.03402US
U.S. Serial No. 10/821,326

68 and 70 of U.S. Patent No. 7,001,452 in view of Heuer *et al.* (US Patent No. 5,874,025) further in view of Bell (US Patent No. 5,426,121) and Preston *et al.* (US Patent No. 6,274,199).

10. Claims 23-48, 57 and 96-105 are rejected as allegedly unpatentable, under the doctrine of nonstatutory obviousness type double patenting, over claims 18-20, 25-29, 43-45, 49-51 and 53 of U.S. Patent No. 6,843,837 in view of Heuer *et al.* (US Patent No. 5,874,025) further in view of Bell (US Patent No. 5,426,121) and Preston *et al.* (US Patent No. 6,274,199).

11. Claims 23-34, 38-44, 57 and 96-105 are rejected under 35 USC § 103(a) as allegedly obvious over Heuer *et al.* in view of Laks *et al.* (US Patent Application No. 2002/0051892).

12. Claims 35-38 and 45-48 are rejected under 35 USC § 103(a) as allegedly obvious over Heuer *et al.* in view of Laks *et al.* and further in view of Bell and Preston *et al.*

13. No claims were allowed.

III. Response to the Office Action

1. Claim Rejections under 35 U.S.C. §112, Second Paragraph

Claim 57 is rejected as allegedly indefinite for reciting the phrase "biocides listed in Table 1." Applicants respectfully traverse this rejection.

Claim 57 has been amended to recite "organic biocide is a compound selected from the group consisting of a fungicide, insecticide, moldicide, bactericide, or algacide, or combinations thereof". Neither claim 57 nor any newly added claim recites the phrase "biocides listed in Table 1". Accordingly, withdrawal of this rejection is respectfully requested.

2. Double Patenting

Applicants respectfully request that the provisional obviousness type double patenting rejections be held in abeyance, until indication of allowable subject matter.

Claims 23-48, 57 and 96-105 are rejected as allegedly unpatentable, under the doctrine of nonstatutory obviousness type double patenting, over claims 21, 24, 25, 31, 35, 54, 57,

PATENT
ATTORNEY DOCKET NO. 38184.03402US
U.S. Serial No. 10/821,326

58, 66-68 and 70 of U.S. Patent No. 7,001,452 in view of Heuer *et al.* (US Patent No. 5,874,025) further in view of Bell (US Patent No. 5,426,121) and Preston *et al.* (US Patent No. 6,274,199).

U.S. Patent No. 7,001,452 ("the '452 patent") discloses a method and a wood preserving composition which is free of poly-aspartic acid and its derivatives comprising *solutions* of: 1) a metal compound; 2) complexing agents selected from ethanolamines, polyethylenimine, ammonia or a mixture of these compounds; and 3) a vinyl based polymer selected from poly(vinyl alcohol) (PVA), poly(acrylamide) (PA), poly(N-vinyl pyrrolidone) (PVP) and poly(N-isopropyl acrylamide) (PNIPAM). The '452 patent discloses metal amine solutions, suitable for the treatment of wood, that minimize metal leaching from the treated wood when exposed to water. Specifically, the '452 patent discloses copper amine compositions comprising copper, polyethylenimine and the vinyl based polymers poly(vinyl alcohol), polyacrylamide, poly(N-vinyl pyrrolidone), and poly(N-isopropyl acrylamide) that minimize leaching and prevent copper precipitation. (See last sentence of Background). The preservative compositions of the '452 patent do not contain poly-aspartic acid or its derivatives. A stated benefit of the compositions of the '452 patent is prevention of copper precipitation. (See last sentence of Background). There is no suggestion or motivation to modify the compositions of the '837 patent to contain particles of an inorganic biocide. To the contrary, the compositions of the '452 patent are designed to prevent precipitation of copper from the wood preservative compositions. Applicants respectfully submit that the Examiner has not established that the pending claims are *prima facie* obviousness over the '452 patent in view of Heuer *et al.* and further in view of Bell and Preston *et al.* and request withdrawal of this rejection.

Claims 23-48, 57 and 96-105 are rejected as allegedly unpatentable, under the doctrine of nonstatutory obviousness type double patenting, over claims 18-20, 25-29, 43-45, 49-51 and 53 of U.S. Patent No. 6,843,837 in view of Heuer *et al.* (US Patent No. 5,874,025) further in view of Bell (US Patent No. 5,426,121) and Preston *et al.* (US Patent No. 6,274,199). Applicants respectfully traverse this rejection.

U.S. Patent No. 6,843,837 ("the '837 patent") discloses a method and a wood preserving composition comprising *solutions* of: 1) a metal compound; 2) complexing agents

- 15 -

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PATENT
ATTORNEY DOCKET NO. 38184.03402US
U.S. Serial No. 10/821,326

selected from ethanolamines, polyethylenimine, ammonia or a mixture of these compounds; and 3) a vinyl based polymer selected from poly(vinyl alcohol) (PVA), poly(acrylamide) (PA), poly(N-vinyl pyrrolidone) (PVP) and poly(N-isopropyl acrylamide) (PNIPAM). The '837 patent discloses metal amine solutions, suitable for the treatment of wood, that minimize metal leaching from the treated wood when exposed to water. Specifically, the '837 patent discloses copper amine compositions comprising copper, polyethylenimine and the vinyl based polymers poly(vinyl alcohol), polyacrylamide, poly(N-vinyl pyrrolidone), and poly(N-isopropyl acrylamide) that minimize leaching and prevent copper precipitation. (See last sentence of Background). A stated benefit of the compositions of the '837 patent is prevention of copper precipitation. (See last sentence of Background). There is no suggestion or motivation to modify the compositions of the '837 patent to contain particles of an inorganic biocide. To the contrary, the compositions of the '837 patent are designed to prevent precipitation of copper from the wood preservative compositions. Applicants respectfully submit that the Examiner has not established that the pending claims are *prima facie* obviousness over the '837 patent in view of Heuer *et al.* and further in view of Bell and Preston and request withdrawal of this rejection.

3. Claim Rejections under 35 U.S.C. §103(a)

a. Heuer *et al.* in view of Laks *et al.*

Claims 23-34, 38-44, 57 and 96-105 are rejected under 35 USC § 103(a) as allegedly obvious over Heuer *et al.* in view of Laks *et al.* (US Patent Application No. 2002/0051892). Applicants respectfully traverse this rejection.

Heuer *et al.* does not disclose or suggest a method for preserving a wood product comprising micronized particles of an inorganic biocide with one or more organic biocides. Heuer *et al.* discloses wood preservatives comprising at least one copper compound and polyaspartic acid or a derivative, a triazole compound and optionally at least one synergistically complementing other fungicide and/or insecticide, an *emulsifier* and/or a small amount of *alkanolamine*. As the Examiner pointed out in the Office Action (p. 13, ll. 6-9 of the OA), Heuer *et al.* does not teach micronized particles of an inorganic biocide. Moreover, the biocide (a copper compound) of Heuer *et al.* is *dissolved as a clear solution*. (col. 2, ll. 9-10) Heuer *et al.* discloses that any insoluble

PATENT
ATTORNEY DOCKET NO. 38184.03402US
U.S. Serial No. 10/821,326

copper/polyaspartic acid addition products are not observed in the solution. (col. 2, ll. 10-12) Heuer *et al.* also teaches that despite the fact that the wood preservative comprises copper compounds, the two fungicides are *emulsified or dissolved in the form of a clear fluid upon dilution with water* (col. 2, ll. 14-18). In fact, Heuer *et al.* discloses that "the advantage of the compositions of Heuer *et al.* is the fact that, for example, triazole compounds, which are not soluble in water, exist in the novel compositions in the form of aqueous emulsions or clear aqueous concentrates. Clear aqueous fluids are formed upon dilution with water." (col. 2, ll. 18-23) Therefore, Heuer *et al.* does not teach a composition comprising micronized particles of an inorganic biocide or micronized particles of an organic biocide in preserving a wood product.

Because Laks *et al.* teaches a method for incorporating biocides into wood, in which the particles size of the components is allegedly 50-400 nanometers, the Examiner alleges that a skilled person would be motivated to make the micronized particles for penetrating wood from the combination of Laks *et al.* and Heuer *et al.*

Applicants respectfully disagree. Laks *et al.* discloses compositions and methods for incorporating dissolved/soluble biocides into nanoparticles that are made of a size that can be pressure-forced into wood or incorporated into wood composites. (Col. 2, line 66; column 3, line 3). The nanoparticles of Laks *et al.* are solid polymers with varying, designed degrees of porosity to control the diffusion rate of the trapped solute. (See paragraph 19). The solutes contained in the pores of the nanoparticles of Laks *et al.* are biocides incorporated into the pores during polymerization. (See paragraph 19). The biocides incorporated into the nanoparticles of Laks *et al.* are solutes that are dissolved in solvent that allows release of the biocide into the wood at a controlled rate. Laks *et al.* also disclose that the biocides are "chosen according to (1) the target organism; (2) solubility characteristics, that is high solubility in the particle forming solvent; (3) stability to the temperature and pH used to polymerize the monomer of choice..." Laks *et al.* discloses biocides that are dissolved in an organic solvent and are not micronized particles. Examples in Laks *et al.* include tebuconazole dissolved in methanol (Example 1A) and chlorothalonil dissolved in N-methylpyrrolidone (Example 1A). The dissolved solutes of Laks *et al.* are not micronized particles of an inorganic or organic biocide.

PATENT
ATTORNEY DOCKET NO. 38184.03402US
U.S. Serial No. 10/821,326

Laks *et al.* is specifically directed to solving the problem of introducing biocides of limited solubility into wood. In particular, Laks *et al.* indicates that according to the thinking in the art, solubility was of such importance that biocides, such as chlorothalonil, having low solubility in organic solvents had to be dissolved in toxic hydrocarbon oils before application to wood. (See paragraphs 4 and 5 of Laks *et al.*) Rather than solving the problem by the use of particles of the biocide itself, Laks *et al.* teach the formation of polymer particles containing a *dissolved organic biocide*, with care taken to select the polymer properties such that the particle gives the appropriate rate of biocide diffusion from the particle (see paragraphs 22 and 23). Essentially Laks *et al.* replaces the carrier in which the particles are insoluble with a polymer in which the biocide can be dissolved. On the whole, Laks *et al.* does not teach that micronized particles of biocides can effectively preserve wood. Accordingly, the combination of Heuer *et al.* with Laks *et al.* does not contain all of the elements of micronized particles of inorganic biocides.

Applicants respectfully submit that the Examiner's combination of references do not teach every element of the pending claims, nor do they render the claimed invention obvious. Accordingly, withdrawal of the rejection is respectfully requested.

b. Heuer *et al.* in view of Laks *et al.* and further in view of Bell and Preston *et al.*

Claims 35-38 and 45-48 are rejected under 35 USC § 103(a) as allegedly obvious over Heuer *et al.* in view of Laks *et al.* and further in view of Bell and Preston *et al.* Applicants respectfully traverse this rejection.

Bell *et al.* do not solve the deficiencies of Heuer *et al.* in view of Laks *et al.* Bell *et al.* disclose the combination of an alkoxylated diamine with water soluble or insoluble copper salt of chloride, sulfate, hydroxide, nitrate, formate, acetate, carbonate, bicarbonate or oxide for use as a wood preservative (column 1, lines 60-68, column 2, lines 1-60, column 3, lines 14-68, column 4, column 5, lines 1-30, 57-68). The copper salt is not a particle of an inorganic biocide. Instead, the salt is present as a *soluble* alkoxylated diamine complex. (col. 1, line 65 - col. 2, line 5). Bell *et al.* is not directed toward the use of particles of biocides. The combination of Heuer *et al.*

PATENT
ATTORNEY DOCKET NO. 38184.03402US
U.S. Serial No. 10/821,326

and Laks *et al.* with Bell *et al.* does not contain all of the elements of the micronized particles of an inorganic biocide.

Preston *et al.* does not disclose the claimed invention. Preston *et al.* disclose a process for treating a wood substrate with a water-based formulation containing a wax for the purpose of conferring water repellency to the wood substrate. (See abstract). The waxes of Preston *et al.* are liquid emulsions and not micronized particles of an inorganic *biocide*. (Column 1, lines 36-40; 50-56; column 2, lines 50-60; column 3, lines 1-8, 11, 12; column 4, lines 50-52; column 5, lines 6-19).

The methods of Preston *et al.* are conducted at an elevated temperature sufficient to melt any solid wax particles that may be formed by turbulent flow, during the treatment of wood.

For the purposes of this invention, the temperature at which the emulsion is applied to the wood substrate is at or above that required to cause the wax present in the emulsion to change into a molten state. Preferably, the temperature is slightly, e.g. about 2 to 10.degree. C., higher than the melting point of the wax present in the emulsion, but preferably not higher than about 90.degree. C. to prevent the water present in the emulsion from flashing off.

The water-based formulations employed in the process of the invention are preferably formulated such that they are stable at the elevated wood treatment temperatures, thereby allowing for penetration of the emulsions into the pores of the wood. It is also desirable that the surfactants chosen for the formulations have the maximum activity at the elevated process temperature, thereby resulting in the formation of emulsions having the lowest possible surface tension.

Treatment at an elevated temperature means that the waxes of Preston *et al.* are liquid (to maximize penetration into the wood pores), contain no micronized particles of biocides and therefore do not meet each limitation of the amended claims.

Therefore, Preston *et al.* also does not disclose or suggest the a method for preserving a wood product comprising micronized particles of inorganic biocide with one or more organic biocide.

PATENT
ATTORNEY DOCKET NO. 38184.03402US
U.S. Serial No. 10/821,326

Applicants respectfully submit that the Examiner's combination of references do not teach every element of the pending claims, nor do they render the claimed invention obvious. Accordingly, withdrawal of the rejection is respectfully requested.

IV. Conclusion.

Applicant believes that the above-referenced application is in condition for allowance. Reconsideration and withdrawal of the outstanding rejections and early notice of allowance to that effect is respectfully requested.

EXCEPT for issue fees payable under 37 C.F.R. § 1.18, the Director is hereby authorized by this paper to charge any additional fees during the entire pendency of this application, including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 13-3250, reference No. 38184.03402. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F. R. § 1.136(a)(3).

If the Examiner finds that a telephone conference would further prosecution of this application, the Examiner is invited to contact the undersigned at 202-835-7553.

Respectfully submitted,

MILBANK, TWEED, HADLEY & McCLOY LLP

Date: May 9, 2008

By:


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